Saskatchewan Centennial 2005

100 YEARS OF HEART

2005-2006 PROVINCIAL BUDGET
PERFORMANCE PLAN

SAFE DRINKING WATER STRATEGY

Minister's Message

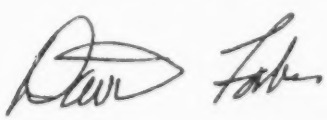
It is my pleasure to present the Performance Plan for the Safe Drinking Water Strategy for 2005-06 on behalf of all involved Government departments and agencies.

Safe drinking water is essential for human health, welfare and to the economic well-being of Saskatchewan's citizens. The departments and agencies participating in the Safe Drinking Water Strategy, including Saskatchewan Environment, Saskatchewan Health, Regional Health Authorities, Saskatchewan Watershed Authority, Saskatchewan Government Relations, SaskWater and Saskatchewan Agriculture and Food are committed to completing the key actions identified in this performance plan. Reporting on the actual progress of the Strategy to the people of Saskatchewan will be provided through the 2005-06 State of Drinking Water Quality Report that will be released in July 2006.

Key actions for 2005-06 are aimed at protecting and improving the quality and sustainability of Saskatchewan's drinking water supplies and source waters. The departments and agencies participating in the Strategy will continue to work with waterworks owners, operators, landowners and other stakeholders to improve the management of drinking water and source water quality. Public safety and environmental protection through better management of drinking water and wastewater systems remain key priorities of the Strategy. Infrastructure investments and policy responses outlined within this plan will help to ensure that we have a clean supply of drinking water in the future.

As Saskatchewan celebrates its Centennial as a Province of Canada, we can look back with pride on all that we have achieved together here in Canada's heartland. Our Centennial also provides a wonderful opportunity to focus on the future and to think about and plan for Saskatchewan's second century.

Whether they receive drinking water from large municipal systems, smaller water treatment plants or individual private systems, the citizens of Saskatchewan need assurance of the safety and security of their drinking water. We at Saskatchewan Environment and other involved departments and agencies look forward to meeting the challenges that lie ahead, as we work together with our clients and stakeholders to improve the quality of drinking water and the sustainability of the systems which produce it.



David Forbes
Minister of Environment

About the Safe Drinking Water Strategy

The Safe Drinking Water Strategy (SDWS) is a comprehensive plan of action designed to deal with the risks that affect drinking water and impact the health of Saskatchewan residents. The SDWS was created as one of a series of Government measures to address drinking water quality and management following the tragedy in Walkerton, Ontario where a number of people died because of contaminated drinking water. It also responds to recommendations from the North Battleford Commission of Inquiry, which examined the waterborne Cryptosporidiosis outbreak that affected that city in 2001. The Strategy, which spans five years, was first announced in April 2002 and since that time has made significant progress in advancing drinking water and source water protection in the Province. Key actions and regulatory improvements are planned for 2005-06 to continue progress of water management in Saskatchewan.

Several departments and agencies are involved in implementing the Strategy including Saskatchewan Environment (SE), Saskatchewan Health, Regional Health Authorities (RHAs), Saskatchewan Watershed Authority (SWA), SaskWater, Saskatchewan Government Relations (GR), and Saskatchewan Agriculture and Food (SAF). These departments and agencies deliver Saskatchewan's regulatory programs and advisory services for drinking water and wastewater management, water source protection, watershed planning, water allocation and most activities that may affect the quality of water. Their programs include:

- An enhanced regulatory environment administered by SE, Saskatchewan Health and RHAs, that has resulted in improved inspection and enforcement actions, water related problem follow-up, water sample analysis, ongoing efforts to promote operator certification, and efforts to enhance public information and accountability surrounding water quality;
- Comprehensive management of the planning, use, development and conservation of Saskatchewan watersheds and source waters through the Saskatchewan Watershed Authority;
- Ongoing operation of SaskWater as a self-sustaining commercial operation providing cost effective water management infrastructure and consulting services to communities;
- Financial support for priority drinking water and wastewater infrastructure improvement through available grant programs administered by GR; and,
- Integrated actions to aid in protection of water sources and supplies by SE, SWA and SAF.

Key partners outside the provincial government include the federal government through the Canada-Saskatchewan Infrastructure Program (CSIP) and the recently announced Canada-Saskatchewan Municipal Rural Infrastructure Fund (CSMRIF), the Saskatchewan Urban Municipalities Association (SUMA), the Saskatchewan Association of Rural Municipalities (SARM), the Saskatchewan Water and Wastewater Association (SWWA), and the Operator Certification Board (OCB). SARM and SUMA were key partners during consultation on the Strategy, and continue to help in its further development and implementation. The SWWA and the OCB

continue a history of advancing waterworks operator certification in the Province. The OCB is appointed by Government, but operates at arm's length in considering the qualification and standing of water and wastewater works operators in the Province. SE leads ongoing planning and policy work for the SDWS to which all participating departments and agencies contribute.

Plan at a Glance

The Strategy partners continue working towards achieving multi-year goals and objectives in support of meeting the Strategy's vision. This is the second comprehensive plan that has been released for the SDWS. The plan will continue to evolve as the strategic planning, performance management and public reporting processes evolve and stakeholder feedback are incorporated. As in past years, we will report actual progress compared to our planned progress in the *2005-06 State of Drinking Water Quality Report*, in July 2006. Previous year-end results have been reviewed and revised to focus efforts to improve water management in the Province. A series of key actions for the 2005-06 fiscal year has been developed to outline how progress will be made for each objective. Additionally a set of performance measures are in place to gauge progress in achieving the objectives. Below is a summary of the 2005-06 Performance Plan for the Safe Drinking Water Strategy.

VISION – A sustainable, reliable, safe and clean supply of drinking water that is valued by the citizens of Saskatchewan

GOAL #1

Waterworks systems and operations provide safe, clean and sustainable drinking water

OBJECTIVE 1 - *Waterworks staff are capable and well trained*

Performance Measure:

- Per cent of communities with human consumptive waterworks whose operators have received some level of certification

OBJECTIVE 2 - *Infrastructure produces water that meets the national drinking water quality guidelines*

Performance Measures:

- Per cent of facilities that meet bacteriological guidelines 90 per cent of the time
- Per cent of waterworks (regulated by SE) that meet disinfection requirements 90 per cent of the time

- Number of waterworks that do not meet Saskatchewan Environment's minimum treatment requirements (broken down by pre and post regulatory changes)

OBJECTIVE 3 - *Waterworks systems and operations are financially sustainable*

Performance Measure:

- Number of municipalities with pricing and capital investment policies in place for their waterworks

GOAL #2

The drinking water regulatory system is clear and effective

OBJECTIVE 1 - *Regulations are clear and ensure that health and drinking water quality will be protected*

Performance Measure:

- Number of accredited drinking water testing laboratories

OBJECTIVE 2 - *Professional regulatory staff have access to the tools necessary to ensure compliance*

Performance Measures:

- Under development

GOAL #3

High quality source waters are protected now and into the future

OBJECTIVE 1 - *Risks to source water quality are known*

Performance Measure:

- Number of sewage effluent discharges that represent a risk to source waters

OBJECTIVE 2 - *Watersheds are protected, natural purification and protection processes are maximized and potential for contamination is minimized*

Performance Measures:

- Number of municipalities with bylaws in place to protect their drinking water supplies
- Water Quality Index (WQI) ratings for watersheds within the Province

GOAL #4

Citizens and consumers trust and value their drinking water and the operations which produce it

OBJECTIVE 1 - *Consumers value quality water and are willing to pay for it*

Performance Measure:

- Per cent of survey respondents indicating that they are willing to pay more for their drinking water

OBJECTIVE 2 - *Citizens and consumers trust the quality and reliability of their drinking water systems and are confident in the regulatory system*

Performance Measure:

- Per cent of survey respondents indicating that they are very or somewhat confident in the quality of their tap water

OBJECTIVE 3 - *Citizens have meaningful access to information about the quality of their water*

Performance Measure:

- Number of system owners that publicly release water quality results

OBJECTIVE 4 - *Reduced consumption of water*

Performance Measure:

- Average per capita consumption of water (gallons per day)

2005-06 Financial Overview

In 2005-06, the Province will invest $24,640 million in safe drinking water. Funding for this Strategy comes from various Government departments and agencies and is contained in their respective appropriation.

2005-06 APPROPRIATION	*(in thousands of dollars)*
Environment – overall co-ordination of the Strategy, regulation and inspection of municipal and larger waterworks and water quality standards	$ 3,106
Saskatchewan Watershed Authority – comprehensive management of the planning, use, development, conservation and protection of Saskatchewan watersheds, source waters, and water management infrastructure	6,165
Health – regulation and inspection of smaller semi-public waterworks, deals with waterborne illnesses and water sample analysis	1,189
Government Relations – federal and provincial water infrastructure assistance under:	
CSIP	10,760
CSMRIF	3,420
Total Appropriation	$ 24,640

Trends and Issues

The following is a summary of the major items that can impact drinking water quality and the future plans of the SDWS to address the associated challenges.

SMALL WATERWORKS

In the 1980s and 1990s there was a significant decline in spending on maintenance and upgrading of water and wastewater treatment infrastructure. At the same time that these systems continue to age, upgrading will be required to meet drinking water quality standards that are presently being phased in. Very small waterworks such as those serving less than 80-100 people, may lack the ability to finance improvements to meet water quality standards, if their raw water supply is not of reasonably good quality to start with. In many cases long-standing Advisories persist for small or remote waterworks due to a number of reasons. Alternatives to conventional water supply and standard infrastructure such as broader introduction of the hygienic waterworks classification and/or use of "regional operators" will be helpful in providing safe water and may offer cost-effective solutions, particularly for smaller systems or locations experiencing significant decline. To aid in resolving these difficulties, further review and consideration of options for small waterworks systems to determine and address problematic situations is a priority activity for the 2005-06 fiscal year.

SUSTAINABLE INFRASTRUCTURE

Sustainable water infrastructure is critical in maintaining public health and economic well-being of Saskatchewan citizens. Many industrial and agricultural operations in Saskatchewan rely on a source of good quality water. These activities if not properly managed can threaten the very water supplies on which they rely. Careful water use allocation, attention to water-use efficiency and proper waste management must be maintained to ensure ongoing productivity and further growth. Given the demands on water treatment systems to meet nationally recognized standards, infrastructure funding will be important in the future success of the Strategy and achievement of its safe drinking water goals. Ongoing funding for works improvement to match the new federal funding programs will also ensure that future infrastructure funding maximizes the potential benefits. A long-term strategy for northern water and sewer needs may also be beneficial. Although there has been a significant investment in infrastructure improvement through Provincial and Federal/Provincial programs such as the Canada-Saskatchewan Infrastructure Program (CSIP), analysis continues to indicate that dealing with costs of ensuring potable water in the future and ensuring access to Federal funding are critical issues which must be addressed if the Strategy is to continue to succeed in the future. To advance the infrastructure improvement, on January 14, 2005 the Government announced the new Canada-

Saskatchewan Municipal Rural Infrastructure Fund (CSMRIF) program that will include grant funding for water and sewer improvements. Funding under the CSMRIF will start to be allocated in the 2005-06 fiscal year.

Under the SDWS, regulatory changes are being advanced that will require municipalities to establish and publicly report on pricing and capital investment policies, including the extent that waterworks revenues cover expenditures and capital debt repayments. For waterworks to be financially sustainable to be able to fund capital investments, rates need to be based as much as possible on cost recovery. Consumers are not always aware of the true cost of providing safe drinking water and therefore undervalue their water supplies. By having access to waterworks information, consumers can determine if they are satisfied with the rate and capital investment policies and whether their system can provide safe drinking water.

SUSTAINING AND PROTECTING WATER SUPPLIES

Saskatchewan continues to face ongoing and growing upstream/downstream pressures in terms of water demand. The potential for changes in water availability could also arise from possible climate change. In terms of advancing related goals, the existing water conservation objective must ensure that sufficient quantities of water will be available for use in future years and under drought conditions. Proper management of water in Saskatchewan requires attention not only to water use planning, allocation and physical infrastructure such as dams and monitoring stations but also involves field research, data management and planning. The Strategy will also benefit from an examination of the potential impacts of climate change on water quantity. Considerable attention to the planning for sustaining and managing source water supplies is planned for 2005-06 to help to protect and enhance the quality and quantity of source water. Consultation on a water conservation plan for Saskatchewan by the Saskatchewan Watershed Authority is one of the key actions being undertaken in the 2005-06 fiscal year to help ensure sustainable and safe source water supplies in the future.

Protecting water sources is also key to ensuring quality drinking water. From the source protection perspective, Saskatchewan could benefit from an expanded system of land use policies which exist in other jurisdictions to direct land use and development processes to protect source water from non-point source contaminants. At the same time it will be important to continue existing source water quality monitoring efforts and expand these to address emerging issues such as trace pesticides, pharmaceuticals, endocrine disrupting substances, northern acid rain, riparian area and forest management concerns. Federal research work has revealed the presence of pesticides in surface water quality reservoirs and placed the province in a reactive position. If the Strategy is to truly achieve its goals it must research and resolve such potentially significant problems that have gained attention in the province and across Canada.

REGULATORY IMPLEMENTATION AND CLARITY

As of late fall 2004, Saskatchewan's drinking water legislation was comparable to or more stringent than similar legislation for other jurisdictions in Canada. This includes jurisdictions that have recently updated their water-related legislation. Enhanced regulation is necessary to ensure that water treatment system owners have the incentive to act responsibly. Although the regulatory framework has been significantly improved with the introduction of the Strategy in April 2002, further review of policy for application of requirements, inter-agency consistency, regulatory roles and reporting responsibilities for the involved departments is planned. This review will aid in additional clarification and ease of implementation of the SDWS while simplifying it for waterworks owners. Consultation on the standards for water and wastewater works operator certification began late in the 2004-05 fiscal. Feedback to date generally indicates that the standards are well founded although minor adjustments may better facilitate attainment of certification goals during 2005-06.

PUBLIC EDUCATION

Public awareness and recognition of the value of water is very important in sustaining the progress on improving water quality, quantity and management through the Safe Drinking Water Strategy. Analysis of issues and trends indicates that further attention to public education on the value of water is needed. Information, programming and actions to aid the understanding of waterworks owners about water quality, what it takes to achieve safe water and the long-term benefits cannot be understated. Knowledge of the impacts of failing to protect source water is also important in advancing efforts on watershed planning achieved to date. Ongoing efforts to improve and broaden public access to timely and accurate drinking water, wastewater and source water quality information is needed to advance the present system and provide comprehensive information which will support public confidence in drinking water supplies. Complacency continues to represent a threat to the safety of water supplies as the immediate memories of the Walkerton and North Battleford water crises retreat from the public spotlight.

Changes From 2004-05 Performance Plan

The goals and objectives included in the Strategy's 2005-06 Performance Plan are unchanged from 2004-05. One performance measure, "Number of certified of operators" has been dropped and replaced with a new measure "Per cent of communities with human consumptive waterworks whose operators have received some level of certification". The replacement measure provides a more accurate reflection on the certification progress at community waterworks.

Goals, Objectives, Actions and Measures

This section provides the detailed 2005-06 Performance Plan for the SDWS that supports advancement towards the vision of a sustainable, reliable, safe and clean supply of drinking water that is valued by the citizens of Saskatchewan. Under each goal a number of objectives have been established that support progress towards the broader goal statement. For each objective, a set of key actions that will be completed in 2005-06 has been identified along with the department or agency responsible. They are the means for making progress on the objectives. To assess whether key actions support the objective, a set of performance measures has been established for each objective to gauge progress towards meeting the objective.

Major cost drivers for the Strategy include field inspection, the need to address water contamination incidents and associated testing costs, infrastructure related demands and unexpected failures, the need to track and manage the application of emerging water quality related standards, and natural events (flood or drought) or incidents affecting source water quality. Other elements affecting the success of the strategy relate to the timing of decisions by project proponents, construction delays and significant weather events affecting construction, all which may impact progress on infrastructure improvements.

GOAL #1

Waterworks systems and operations provide safe, clean and sustainable drinking water

OBJECTIVE 1 *- Waterworks staff are capable and well-trained*

Provision of safe drinking water is highly reliant on the knowledge and capabilities of waterworks operators and the manner in which they apply their skills to produce and monitor the quality of drinking water. Along with source protection, sound and capable infrastructure and water quality monitoring, knowledgeable operators capable of sound waterworks operations are one of the elements of a "multi-barrier approach" to ensure safe drinking water.

Key Actions for 2005-06

- Continue to support implementation of operator certification requirements by the deadline of July 2005. Operator certification will be advanced by encouraging the development of co-operative solutions with service providers, refining and implementing a system of shared "regional operators", liaising with the SWWA and workshops, etc. [Environment]
- The outcome of the 2004-05 Certification Advisory Committee review of operator certification requirements will be examined and advanced to enhance operator training. If found appropriate, certification of all operators working at Environment regulated waterworks by 2010 will be advanced. As an aspect of the multi-barrier approach, operator certification remains a critical element in ensuring safe drinking water. [Environment]

What are we measuring?	**Where are we starting from?**
Per cent of communities with human consumptive waterworks whose operators have received some level of certification	54.3% *[September 30, 2004]*

This performance measure quantifies the number of communities with waterworks operators that have been certified to some level and directly supports gauging progress towards the objective. The greater the number of communities with certified operators, the greater the safety of the water supply since operator knowledge will influence the quality of water produced. SE influences this measure by establishing regulations that require the certification of operators, however, it is up to each waterworks owner to ensure that they comply with the regulations.

OBJECTIVE 2 *- Infrastructure produces water that meets the national drinking water quality guidelines*

Infrastructure design, capability, condition and maintenance are critical in the production of safe drinking water. Standards, incentives, requirements, compliance measures and implementation plans must also be in place to ensure that waterworks are operated and monitored to achieve drinking water of a quality that protects human health. The *Guidelines for Canadian Drinking Water Quality* (see: http://www.hc-sc.gc.ca/hecs-sesc/water/dwgsup.htm) are

used in Canada as the definitive measure of science-based safety criteria for drinking water. Saskatchewan has now adopted the guidelines as standards (see: http://www.se.gov.sk.ca/environment/protection/water/Drinking_Water_Standards_post.pdf).

Key Actions for 2005-06

- Advance and implement strategies to aid small waterworks to ensure the provision of safe water by affordable and publicly acceptable means. This approach will further enhance provision of safe water in the province. [Environment]
- Implementation of a 'cluster strategy' to establish regional anchors from which water services are delivered is underway. This business growth strategy allows the more cost-efficient and effective delivery of services compared to service provision on a one-off basis. In addition, SaskWater will continue seeking to expand the customer base for its existing regional water supply systems. [SaskWater]
- To assist northern municipalities in providing safe drinking water and ensuring sewer systems do not contaminate surrounding areas and water sources, $6.3 million has been allocated under the Northern Water and Sewer Program for projects in northern Saskatchewan, of which $4 million will be CSIP funding. In addition, $800,000 will be available under the Northern Emergency Water and Sewer Program for emergency repairs to water and sewer systems. Also, $395,000 will be made available to provide engineering, operating and maintenance expertise and advice to northern communities on their water and sewage systems. Government Relations will also develop and implement a strategy to address longer term critical northern water and sewer needs. [Government Relations]
- $10.76 million in federal and provincial funding will be paid out under the CSIP to previously approved water and sewer projects. All funding has been allocated under the CSIP. Under the new CSMRIF, it is estimated that about $3.42 million in federal and provincial funding will be allocated to municipalities in 2005-06 for water and sewer projects. This funding will assist municipalities in providing safe drinking water and ensuring sewer systems do not contaminate surrounding areas and water sources. [Government Relations]

What are we measuring?	**Where are we starting from?**
Per cent of facilities that meet bacteriological guidelines 90 per cent of the time	91.4% *[August 31, 2004]*

The bacteriological quality of water is a key component of ensuring safe drinking water because of the potential for short-term (relatively immediate) health effects in the event of contamination. Bacteriological water quality is a key component of the *Canadian Guidelines for Drinking Water Quality* and Saskatchewan's drinking water quality standards. They are presently in full effect in the Province. Compliance with bacteriological water quality standards is a meaningful indicator of acute drinking water quality. SE has a high level of influence in the achievement of this requirement through regulations, education, compliance and enforcement actions.

What are we measuring?

Per cent of waterworks (regulated by Saskatchewan Environment) that meet disinfection requirements 90 per cent of the time

Where are we starting from?

86.5%
[August 31, 2004]

Disinfection of drinking water is key to preventing the spread of many waterborne diseases and is therefore integral in the protection of public health. In order to ensure drinking water is free of bacterial concerns, a total chlorine residual of 0.5 mg/L or a free chlorine residual of 0.1 mg/L must be maintained throughout the distribution system. Compliance with disinfection requirements is a good measure of the success of compliance related activities and also a measure of the bacteriological (acute) safety of the water supply. To achieve increased compliance, waterworks operators may be influenced through education, compliance and enforcement actions. There is a high correlation with waterworks having frequent bacteriological samples indicating the presence of bacteria and low chlorine residual maintenance.

What are we measuring?

Number of waterworks that do not meet Saskatchewan Environment's minimum treatment requirements (broken down by pre and post regulatory changes)

Where are we starting from?

23 systems (before regulatory changes)
2 systems (post regulatory changes)
[September 30, 2004]

Certain water treatment actions are required at waterworks as a means to ensure basic treatment and protection of drinking water. For systems using groundwater sources, disinfection is required. Treatment for systems using surface or blended water sources requires an acceptable form of filtration and disinfection. The number of waterworks that do not meet minimum treatment requirements is a good measure of infrastructure water treatment capability. There is a high level of influence through regulations, but given significant costs associated with treatment plants upgrades, changes to reduce the number of affected waterworks take time. The number of waterworks not meeting minimum treatment requirements is likely to increase as existing but newly regulated waterworks are permitted in the future, since the construction and operation of these works was not previously governed. Since a number of existing waterworks are now governed by recent regulatory changes, this measure recognizes these differences.

OBJECTIVE 3 - *Waterworks systems and operations are financially sustainable*

Ensuring the financial sustainability of the water and wastewater works is critical in the production of safe drinking water and proper wastewater management over the long-term. Waterworks deteriorate over time and therefore may need to be expanded or replaced. Municipalities will therefore need to know the condition of waterworks and put in place pricing and capital investment policies for these systems. Public transparency will aid in ensuring that water and wastewater systems are sustainable into the future.

Key Actions for 2005-06

- Consultation and enactment is planned for regulations requiring municipalities to establish and report to the public on pricing and capital investment polices for their waterworks and other related key financial information, including the extent that waterworks revenues cover expenditures and capital debt payments. These regulations will provide greater municipal accountability to ratepayers and promote greater understanding of municipal waterworks. Ratepayers can evaluate this information and determine if they are satisfied with the rate and capital investment policies. Municipal waterworks rate and capital investment bylaws are to be in place by July 1, 2006 and annual public reporting is to begin September 1, 2006. [Government Relations]

What are we measuring?	**Where are we starting from?**
Number of municipalities with pricing and capital investment policies in place for their waterworks	Less than 5% *[March 31, 2004]*

This measure quantifies the number of municipalities that have pricing and capital investment policies in place for their waterworks and gauges progress towards the objective. Government influences the measurement results through the establishment of regulations. Lack of municipal capacity will limit some smaller municipalities from establishing these policies.

GOAL #2

The drinking water regulatory system is clear and effective

OBJECTIVE 1 - *Regulations are clear and ensure that health and drinking water quality will be protected*

Provision of safe drinking water is reliant on regulatory requirements that are clear and communicated to owners and operators of waterworks. Additionally, accepted standards and practices are required to ensure requirements are achieved in the proper manner. Program delivery and related policies are necessary to track and ensure that regulatory requirements are being met. Collectively, these measures will help to ensure that drinking water is safe and that wastewater effluent discharges do not threaten the quality of source waters or adversely impact the environment. Performance measures under Goal 1 (Waterworks systems and operations provide safe, clean and sustainable drinking water) provide additional support in gauging progress towards this objective.

Key Actions for 2005-06

- Develop mechanisms to clarify and simplify regulatory requirements for owners of waterworks to advance compliance and water safety. [Environment]
- Work will continue with SUMA, SaskWater, consulting engineers and others to implement a program to facilitate waterworks assessment in the Province. Waterworks assessment standards and other information will continue to be provided to waterworks owners to inform them of the benefits, requirements and timelines of the assessment process. [Environment]
- Semi-public water systems are regulated through *The Health Hazard Regulations.* Compliance with these regulations is monitored through inspections of the semi-public water systems, ensuring that the operators are routinely sampling the water supply, and reviewing water quality test results. All health regions with the exception of the far north (Mamawetan Churchill River Health Region) will be striving for 100% inspections (approx 1400) of their public water supplies. Due to staff shortages and geographic location of semi-pubic water systems in the north (access only by plane/boat) the Mamawetan Churchill River Health Region (MCRHR) will be using a risk-based approach for prioritizing inspections of water supplies that they regulate. Saskatchewan Health is currently working with the MCRHR to develop strategies for inspecting remote type water supplies. [Health & Regional Health Authorities]
- In accordance with the recommendations of the North Battleford Commission of Inquiry, frequent and rigorous inspections will continue across the Province for SE regulated waterworks. Two inspections at each surface water and priority groundwater waterworks and one inspection at every other regulated waterworks will be completed totaling approximately 900 inspections. Supplemental education and prevention activities will be conducted to ensure waterworks meet operational and treatment requirements. Inspection protocols will continue to be kept abreast of developments in water treatment technologies. [Environment]
- A new *Contaminated Drinking Water Follow-up Protocol* will be developed to deal with incidents of chemical contamination of water supplies. The Bacteriological Follow-up Protocol will be revised to reflect evolving analytical methods, best practices or new developments. [Environment]
- Continue to implement the water and wastewater compliance and enforcement protocol to attain compliance with drinking water regulatory requirements. Department technical staff will receive new compliance and enforcement related training. [Environment]

What are we measuring?	**Where are we starting from?**
Number of accredited drinking water testing laboratories	6 *[August 31, 2004]*

The number of accredited laboratories is a good measure of the ability of laboratories to ensure high quality and representative analytical results that reflect the true quality of drinking water. SE influences this measure through the establishment of regulations that effectively require water testing labs to be accredited. However, lab owners must cover the cost of accreditation.

OBJECTIVE 2 *- Professional regulatory staff have access to the tools necessary to ensure compliance*

Provision of safe drinking water is reliant in part on the training and tools that regulatory staff can access. The tools take the form of working agreements, computerized information systems as well as examples, guidelines and education information needed to deliver programming. Staff qualifications must also be assured and kept current with new or evolving water management processes. Collectively, these tools help to ensure that drinking water is safe and that wastewater effluent discharges do not threaten the quality of source waters or adversely impact the environment. Development of performance measures for this objective has been complicated as a result of the difficulty in gauging the effectiveness of training and related retention issues.

Key Actions for 2005-06

- Annual educational water quality workshops will be held for officials (medical health officers and public health inspectors) to strengthen integration between regulators. These meetings also provide ongoing communication and exchange and serve as a means to continually improve protocols on communicable disease response and exchange information on provincially regulated systems. [Health and Environment]
- Further enhancement of the Environmental Management System will be undertaken to support drinking water management, compliance activities and handle ever-increasing demand for data and information. Contingent on successfully completing trials on bar coding water sample bottles, drinking water information will be available to the public in two or three days as opposed to four to six weeks as is the case now. Further planning for managing wastewater information will be undertaken. [Environment]
- Examine timing issues with respect to northern Regional Health Authority (RHA) water sample testing. [Health and Mamawetan Churchill Health Region]

What are we measuring?	**Where are we starting from?**
Under development	Under development

GOAL #3

High quality source waters are protected now and into the future

OBJECTIVE 1 *- Risks to source water quality are known*

Protection of source water quality is a component of the provision of safe drinking water. Identification of risks to source water quality is the first step in developing actions and strategies to protect source water and minimizing the cost to treat drinking water. Through the watershed planning actions outlined below, it is expected that other risks to source water quality will be identified. Subsequently, additional actions and measures will be considered in the future as a means to deal with newly identified risks.

Key Actions for 2005-06

- Preparation and publication of a *State of the Watershed Report* will be undertaken. Additionally a plan for preparation of future reports based on public comments on the *State of Watershed Reporting Framework* will be performed. Data collection on stressors to surface and ground water quality will be performed. Water quality data and interpretation will be provided to planning committees. [Saskatchewan Watershed Authority]
- A water-use monitoring program will be developed and implemented to ensure actual municipal, industrial and agricultural water use is known and is within the allocated amount. Data will also be collected on water supply and preparation of a water supply report will be initiated. [Saskatchewan Watershed Authority]
- The current water quality monitoring program will be revised to include data for key indicators of watershed and aquifer health. Further revisions will be made to the Saskatchewan Watershed Authorities water quality monitoring program in 2005-06 for key indicators of watershed and aquifer health. [Saskatchewan Watershed Authority]
- Inspections at sewage treatment facilities in the province will be conducted in accordance with the department's protocol to track and begin the process of improving the management of systems which represent a risk to source water quality. Improvements in wastewater management will be initiated through owner education and permitting methods. [Environment]
- The Rural Water Quality Advisory Program will, over the next two years (2005-2006), sample and test 360 wells in the Gull Lake and Yorkton aquifers as part of a systematic evaluation of risk to human health. [Saskatchewan Watershed Authority]
- Contribute to the development of start-up protocols for oil industry to help ensure protection of groundwater resources. [Environment]

What are we measuring?	**Where are we starting from?**
Number of sewage effluent discharges that represent a risk to source waters	93 *[March 31, 2004]*

The number of sewage effluent discharges that represent a risk to source waters is a good measure of the degree of protection afforded by wastewater treatment systems presently in place. Ensuring a minimum of secondary treatment and proper effluent discharge management will help to reduce risks to source water since wastes will be properly treated and released to the environment. SE has a high level of influence through regulations, but given significant costs associated with upgrading, changes to reduce the number of affected wastewater works takes time.

OBJECTIVE 2 *- Watersheds are protected, natural purification and protection processes are maximized and potential for contamination is minimized*

Protection of source waters can reduce the costs of water treatment, and improve water quality while helping to maintain other water uses. Sound water resource management means that the processes which break down wastes must be protected as must land use practices which can protect water quality from contamination. Actions in terms of both organizational structure and watershed/water management are improving source water protection in the province.

Key Actions for 2005-06

- Work to lead the development of a Canada-wide Strategy for the Management of Municipal Wastewater Effluent (MWWE) will continue. This work will help aid in the development on better wastewater management practices in Saskatchewan as well as increased source water protection. This strategy is being developed through the auspices of the Canadian Council of Ministers of the Environment as a means to forward MWWE management in a consistent manner across Canada. [Environment]
- Complete source water protection plans for the Assiniboine and Moose Jaw River watersheds, and the Yorkton aquifer. Continue working with local planning committees toward completion of source water protection plans in the Lower Souris, Upper Qu'Appelle, South Saskatchewan and North Saskatchewan River watersheds. [Saskatchewan Watershed Authority]
- Submit legislative amendments to the Legislature for 2005 to combine and modernize existing legislation. [Saskatchewan Watershed Authority]
- Municipalities and stakeholders will be consulted on the second phase of the renewal of *The Planning and Development Act*, 1983 that will include requiring municipalities to implement land use bylaws to protect water sources. The requirements for municipal bylaws will be co-ordinated with SWA's staged implementation of protection of watersheds. This will ensure that the municipalities have bylaws in place that meet the standards required to protect the watersheds. [Government Relations]

What are we measuring?	**Where are we starting from?**
Number of municipalities with bylaws in place to protect their drinking water supplies	19% (153 of 809 municipalities) *[2004 calendar year]*

The number of municipalities with bylaws in place to protect their drinking water supplies is a good measure of source water protection. Bylaws will work towards ensuring safe drinking water. GR will encourage water source protection in municipal land use bylaws and has a moderate level of control over municipal bylaws to ensure protection of source waters.

What are we measuring?

Water Quality Index (WQI) ratings for watersheds within the Province

Where are we starting from?

Qu'Appelle – fair to good[1]
South Saskatchewan – good to excellent
North Saskatchewan – good to excellent
Saskatchewan River – good to excellent
Moose Jaw River – poor to fair[2]
Souris River at 18 Highway – fair to good
Assiniboine River – good to excellent
Churchill River – excellent
Beaver River – good to excellent
[March 2004]

[1] *There are two locations in the Qu'Appelle Basin where the quality would be considered marginal for protection of aquatic life. The basin ranges from fair to excellent for livestock watering and irrigation purposes.*

[2] *Major water quality concerns along the Moose Jaw River stem from nutrients and suspended solids from man-made sources (waste water discharge and agricultural activities) and natural variation (flow, run-off and snow melt).*

The Water Quality Index is an overall measure of the quality of water for specific uses such as the protection of aquatic life, livestock watering, recreation, etc. The Index is a composite of different chemicals and organisms in the water at safe levels for a particular use. It is a good measure of the quality of surface or groundwater.

The Government has little direct control over the results of this broad measure of water quality. Samples are collected by industries and municipalities in accordance with their permits, as well as by department staff and other agencies. The levels of chemicals and organisms in the samples are compared with the WQI levels for safety and health of the people.

The assessment of all watersheds using the WQI is a long-term project. Saskatchewan Environment will be using the data collected from its primary monitoring stations on the major trans-boundary watersheds. WQI rating in the Qu'Appelle River Watershed is expected to improve over the long-term as a result of watershed planning efforts led by SWA.

GOAL #4

Citizens and consumers trust and value their drinking water and the operations which produce it

OBJECTIVE 1 - *Consumers value quality water and are willing to pay for it*

Saskatchewan residents are not always aware of the cost of providing safe drinking water. Protection of source waters, the ability to treat source water and ensure sustainable supplies is dependant on consumers that recognize the value of water and are willing to pay for it at present and in the future.

Key Actions for 2005-06

- Expand the core group of trained facilitators who assist with the delivery of environmental education programs including Project Wet, Project WILD, and Climate Change which are directly linked to the Saskatchewan curricula. [Saskatchewan Watershed Authority]
- Promote watershed stewardship by publishing the Prairie Update newsletter, promoting best management practices through the weekly press, partner communication vehicles, signage and trade show displays. [Saskatchewan Watershed Authority]
- Publications (brochures) and workshop elements will be provided to inform consumers of the cost and value of water. This information will focus on the benefits for individual consumers and society by better managing water demand and consumption. [Environment]

What are we measuring?	**Where are we starting from?**
Per cent of survey respondents indicating that they are willing to pay more for their drinking water	61.9% *[May 2003; latest data available]*

The public willingness to pay more for water is a measure of how much the public values safe drinking water provided by means of municipal or public treatment and supply works. It is also an indirect measure of the confidence and trust in drinking water supplies and the water provider's and Government's ability to produce and ensure safe drinking water. Since this is measured through public polling, results could be influenced by events outside the province.

OBJECTIVE 2 - *Citizens and consumers trust the quality and reliability of their drinking water systems and are confident in the regulatory system*

Consumer trust in drinking water and regulatory systems that govern them is vital to ensuring the long-term sustainability of waterworks. Consumers who trust the quality and reliability of their water supplies are more willing to support the production of safe drinking water in the future. Release of polling results also bolsters transparency and public trust.

Key Actions for 2005-06

- Continue to implement the drinking water polling strategy and publish results, which will allow tracking of public opinion and trust in drinking water and the associated regulatory systems. This approach will allow the Department to determine changes in opinion within the province and how those opinions compare with residents of other provinces in Canada. [Environment]

What are we measuring?	**Where are we starting from?**
Per cent of survey respondents indicating that they are very or somewhat confident in the quality of their tap water	87% *[May 2003; latest data available]*

Public confidence in drinking water quality is a good measure of the public trust in the ability of waterworks owners and governments to deal with the challenges of providing safe water. Since this is measured through public polling, results could be influenced by events outside the province.

OBJECTIVE 3 *- Citizens have meaningful access to information about the quality of their water*

Information on water quality is important in building public trust in water systems. Information must be understandable, current and readily accessible. To build full trust, information needs to be available both from the waterworks owner and the regulator.

Key Actions for 2005-06

- Consultation and enactment is planned for regulations requiring municipalities to establish and report to the public on pricing and capital investment polices for their waterworks and other related key financial information, including the extent that waterworks revenues cover expenditures and capital debt payments. These regulations will provide greater municipal accountability to ratepayers and promote greater understanding of municipal waterworks. Ratepayers can evaluate this information and determine if they are satisfied with the rate and capital investment policies. Municipal waterworks rate and capital investment bylaws are to be in place by July 1, 2006 and annual public reporting is to begin September 1, 2006. [Government Relations]
- Publish state of watershed reports. Prepare plan for preparation of future reports based on public comments on the *State of Watershed Reporting Framework*. [Saskatchewan Watershed Authority]
- Technical aspects of a Drinking Water Quality Index (DWQI) will be examined to determine how best to include current information to convey information to consumers on water quality and the adequacy of systems that produce drinking water. The DWQI is intended to provide a means for consumers to understand the relative quality of their water (e.g. fair to excellent) and the state of the waterworks which produce it. [Environment]

What are we measuring?	Where are we starting from?
Number of system owners that publicly release water quality results	76% *[January 2004]*

The number of system owners that publicly release water quality results is a good measure of the acceptance of waterworks owners in recognizing their responsibility for safety of water and education of public. The Government has a high level of influence in the achievement of this requirement through regulations.

OBJECTIVE 4 *- Reduced consumption of water*

Reduced consumption of water is important in minimizing costs and thereby properly valuing water. Water conservation is also necessary to protect water source quality and abundance, particularly in time of increased demand.

Key Actions for 2005-06

- Complete the *Water Conservation Plan*, based on input from public consultations, by the end of 2005. Public education and information materials will be developed and distributed to enhance consultation on the water conservation plan and to promote water conservation. [Saskatchewan Watershed Authority]

What are we measuring?	Where are we starting from?
Average per capita consumption of water (gallons per day)	82.5 gallons per day *[2003-04]*

This measure quantifies the average water usage on a per capita basis and directly supports gauging progress towards the objective. The Government has a limited degree of control over this measure. However, it can influence the measurement result through its educational efforts.

For More Information

If you have any questions or comments about the plan, or would like additional copies, we invite you to call:

Saskatchewan Environment's Inquiry Centre: (306) 787-2700
Toll free in Saskatchewan: 1-800-567-4224

Or visit us on-line at:
http://www.se.gov.sk.ca

Additional information on drinking water is available at:
http://www.se.gov.sk.ca/environment/protection/water/water.asp
http://www.se.gov.sk.ca/environment/protection/water/drinking.asp
http://www.saskh2o.ca/